Slingshot Car

Kit contains:

- 1 cardboard rectangle
- 4 cardboard wheels
- 2 wooden skewers
- 2 straw pieces
- 1 rubber band

You will need: tape, a pencil with eraser, glue, and decorating supplies (optional).

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INSTRUCTIONS

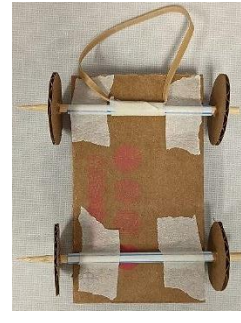
Step 1. Put one cardboard wheel on each skewer (axle). Use the pointy end to poke through the center hole.

Step 2. Tape the rubber band to the middle of one straw.

Step 3. Tape parallel straws to the cardboard base.

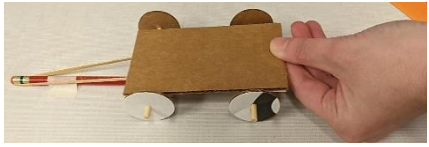
Step 4. Slide the axles through the straws.

Step 5. Put wheels on the other sides of the axles.



Step 6. Tape your pencil to the floor.

TO LAUNCH: Brace the rubber band on the pencil's eraser. Pull back the car. Release!



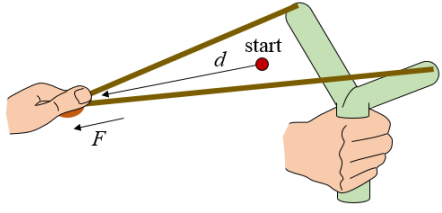
Once you are happy with your slingshot car's functionality, decorate it to your heart's content.

TROUBLESHOOTING: If your wheels are loose on the axles, they might not get sufficient traction on the ground. Add a bit of glue to secure them to the skewers.

A REAL SLINGSHOT CAR?! In 2015, Polaris debuted a 3-wheeled motorcycle known as the Slingshot car. Sadly, it is propelled by a normal motor as opposed to rubber bands.

SLINGSHOT PHYSICS

Devices like slingshots (or slingshot cars!) work by storing energy in elastic materials, such as the rubber bands. The stored energy is called **potential energy**. The farther the rubber bands are stretched, the more potential energy is stored. When the rubber bands are released, the potential energy that has been stored up is converted into **kinetic energy**, the energy of motion.



Newton's Third Law of Motion states that for every force there is an equal and opposite force. When you create a low of force pulling back the rubber band, you can expect a strong force forward. End result: zooming!